DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:

GILE POND

Lake Area (ha):

22.22

Town:

SUTTON

Maximum Depth (m):

3.1

County:

MERRIMACK

Mean Depth (m):

1.8

River Basin:

MERRIMACK

Volume (m³):

400500

Latitude: Longititude: 43°43'21" N 71°71'55" W Relative depth:

0.6

Elevation (ft):

902

Shore Configuration: Areal water load (m/yr): 1.14 3.6

Shore length (m):

1900

Flushing Rate (yr⁻¹):

P retention coeff.:

2 0.72

% Watershed Ponded: Watershed Area (ha) 0 134.7

Lake Type

natural

BIOLOGICAL:		13-Jan-04	16-Jun-03
DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 85%	UROGLENOPSIS 75%
	#2		DINOBRYON 10%
	#3		MALLOMONAS 7%
CHLOROPHYLL-A (ug/L)			3.11
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 31%	NAUPLIUS LARVA 28%
	#2	POLYARTHRA 26%	KERATELLA 20%
	#3	BOSMINA 18%	POLYARTHRA 17%
ROTIFERS/LITER		159	235
MICROCRUSTACEA/LITER		99	188
ZOOPLANKTON ABUNDANCE (#/L)		268	469
VASCULAR PLANT ABUNDANCE			Common/Abundant
SECCHI DISK TRANSPARENCY (m)			2.7 VOB
BOTTOM DISSOLVED OXYGEN (mg/L)		12.4	8.3
BACTERIA (E. coli, #/100ml)	#1		<10
	#2		<5
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m):

None

Hypolimnion volume (m³): Anoxic Volume (m³):

None None

CHEMICAL:		Lake: Town:	GILE PO	ND	
	13-Jan-0	1		16-Jun-03	
DEPTH (M)	1.5		1.5		
pH (units)	6.0		6.2		
A.N.C. (Alkalinity)	3.4		3.3		
NITRATE NITROGEN	< 0.05		< 0.05		
TOTAL KJELDHAL NITROGEN	0.60		0.30		
TOTAL PHOSPHORUS	0.009		0.010		
CONDUCTIVITY (umhos/cm)	57.3		58.8		
APPARENT COLOR (CPU)	50				
MAGNESIUM			0.49		
CALCIUM			2.3		
SODIUM			7.1		
POTASSIUM			0.54		
CHLORIDE	10		12		
SULFATE	3		2		
TN: TP	69		33		
CALCITE SATURATION INDEX					

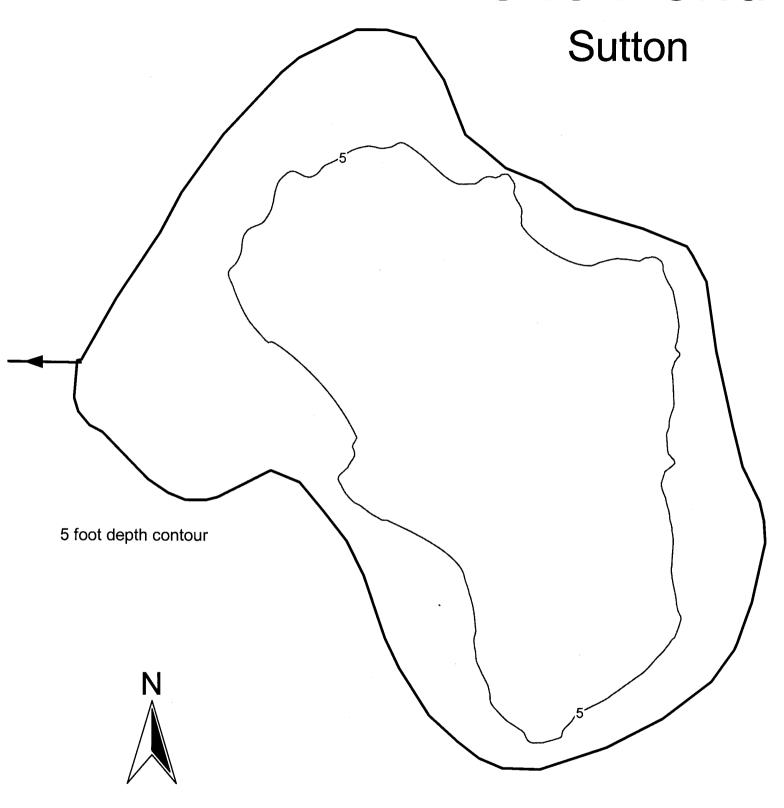
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2003	D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
	**	2	4	0	6	MESO

COMMENTS:

- 1. Previously surveyed in 1980. Borderline meso-eutrophic in both years.
- 2. An adequate but unimproved and difficult to find launch site was located off Gile Pond Road; limited parking. Another access with more parking available was located on the main road but was suitable for canoes only.
- 3. Mostly undeveloped shoreline one house present.
- 4. Tea colored, moderately acidic pond.

Gile Pond



0 0.1 0.2 Kilometers

FIELD DATA SHEET

LAKE: GILE POND

TOWN: SUTTON

DATE: 6/16/03

WEATHER: Sunny with light breeze; 70s

	DEPTH (M)	TEMP (°C)	DISSOLVED OXYGEN (mg/L)	PERCENT SATURATED
	0.1	20.3	8.5	93.8
	1.0	19.6	8.0	87.5
	2.0	19.4	8.4	91.3
	2.5	19.4	8.3	90.6
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SECCHI DEPTH (m): 2.7 VOB

7 VOB

BOTTOM DEPTH (m):

2.7

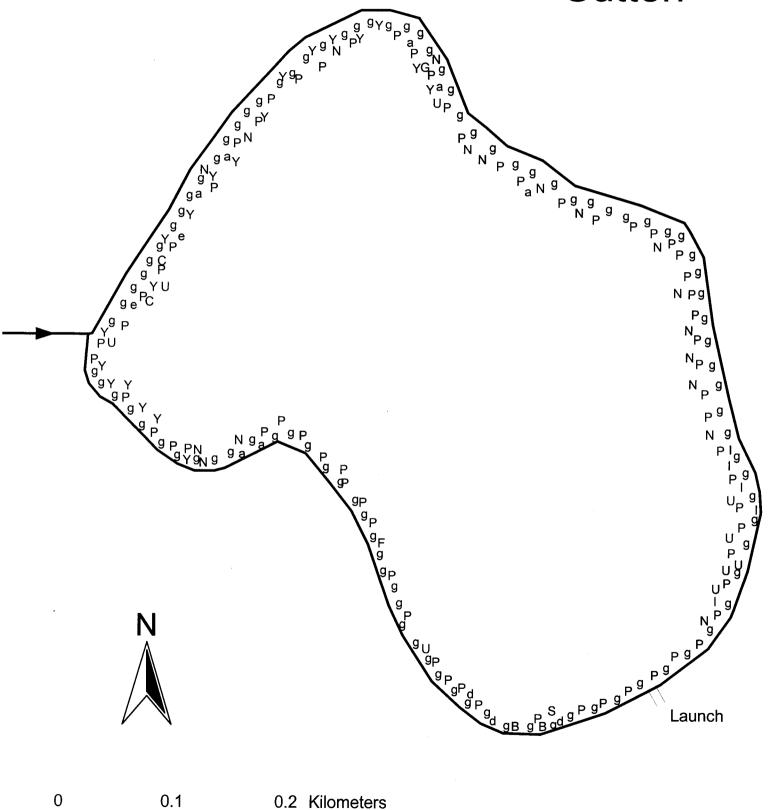
TIME:

1100

COMMENTS:

Gile Pond

Sutton



AQUATIC PLANT SURVEY

LAI	KE: GILE POND	TOWN: SUTTON	DATE: 6/16/03		
KEY		PLANT NAME	ADVIDANCE		
XE I	GENERIC	COMMON	ABUNDANCE		
g	Myrica gale	Sweet gale	Common		
P	Pontederia cordata	Pickerelweed	Common		
N	Nymphaea	White water lily	Scat/Common		
I	Iris	Iris	Scattered		
U	Utricularia	Bladderwort	Scattered		
a	Peltandra virginica	Arrow arum	Scattered		
G	Gramineae	Grass family	Sparse		
Y	Nuphar	Yellow water lily	Scat/Common		
e	Eleocharis	Spike rush	Sparse		
С	Cyperaceae	Non-flowering sedge	Sparse		
d	Dulichium arundinaceum	Three-way sedge	Sparse		
В	Brasenia schreberi	Water shield	Sparse		
S	Sparganium	Bur reed	Sparse		
F	Nymphoides cordatum	Floating heart	Sparse		
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OVERALL ABUNDANCE:

Common/Abund

GENERAL OBSERVATIONS:

- 1. This was an early summer survey after a cold, wet spring. Many plants were immature; plants were likely more abundant later in the summer.
- 2. Essentially the entire shoreline was ringed with sweet gale and pickerelweed.